Appl. No. 10/080,507 Amdt. dated April 17, 2006 Reply to Office Action of January 23, 2006

Amendments to the Specification:

Please replace paragraph at page 4, lines 5-26 with the following amended paragraph:

For example, in the case of preparing a photoresist copolymer from alicyclic olefin derivatives, for example, as represented by the following Chemical Formula 4, polymerization is performed by dissolving two or more compounds represented by Chemical Formula 4 and a cross-linking monomer of Chemical Formula 1 in organic solvent, and adding a radical initiator or a metal catalyst to the resultant solution to induce polymerization:

< Chemical Formula 4>



wherein, k and n individually represent the number 1 or 2; p represents a number from 0 to 5, R_5 and R_6 individually represent hydrogen or methyl, R_1 , R_2 , R_3 and R_4 individually represent hydrogen, straight or branched C_{1-10} alkyl, straight or branched C_{1-10} ester, straight or branched C_{1-10} acteal, straight or branched C_{1-10} acteal, straight or branched C_{1-10} acteal, straight or branched C_{1-10} alkyl including at least one hydroxyl group, straight or branched C_{1-10} ester including at least one hydroxyl group, straight or branched C_{1-10} acteal including at least one hydroxyl group, and straight or branched C_{1-10} acteal including at least one hydroxyl group, and straight or branched C_{1-10} acteal including at least one hydroxyl group, and straight or branched C_{1-10} acteal including at least one hydroxyl group, and straight or branched C_{1-10} acteal including at least one hydroxyl group, straight or branched C_{1-10} ester including at least one hydroxyl group, straight or branched C_{1-10} ester including at least one hydroxyl group, straight or branched C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10} eacted C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10} acted C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10} acted C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10} acted C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10} acted C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10} acted C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10} acted C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10}

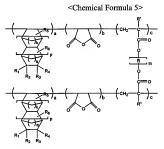
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including at least one hydroxyl group. In another embodiment, all of R1, R2, R3, and R4 do not represent hydrogen at the same time.

Please replace the paragraph at page 5, line 8 - page 6, line 8 with the following amended paragraph:

A desirable photoresist polymer prepared by using the polymerization process of the present invention is represented by following Chemical Formula 5:



wherein, k and n individually represent the number 1 or 2; m represents a number from 1 to 10; p represents a number from 0 to 5; R', R'', R₅ and R₆ individually represent hydrogen or methyl; R is selected from the group consisting of straight or branched C_{1-10} alkyl, straight or branched C_{1-10} ester, straight or branched C_{1-10} ketone, straight or branched C_{1-10} carboxylic acid, straight or branched C_{1-10} acetal, straight or branched C_{1-10} alkyl including at least one hydroxyl group, straight or branched C_{1-10} ester including at least one hydroxyl group, straight or branched C_{1-10} carboxylic acid including at least one hydroxyl group, straight or branched C_{1-10} carboxylic acid including at least one hydroxyl group, and straight or branched C_{1-10} acetal including at least one hydroxyl group, R_{1} , R_{2} ,

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 R_3 and R_4 are individually selected from the group consisting of hydrogen, straight or branched C_{1-10} alkyl, straight or branched C_{1-10} ester, straight or branched C_{1-10} carboxylic acid, straight or branched C_{1-10} acetal, straight or branched C_{1-10} alkyl including at least one hydroxyl group, straight or branched C_{1-10} ester including at least one hydroxyl group, straight or branched C_{1-10} ketone including at least one hydroxyl group, straight or branched C_{1-10} ketone including at least one hydroxyl group, and straight or branched C_{1-10} acetal including at least one hydroxyl group, and the ratio a:b:c is preferably 1-50 mol%: 10-50 mol%: 0.1-20 mol%.—In one embodiment, at least one of R1, R2, R3, and R4 represent straight or branched C1-10 alkyl including at least one hydroxyl group, straight or branched C1-10 ketone including at least one hydroxyl group, straight or branched C1-10 ketone including at least one hydroxyl group, straight or branched C1-10 carboxylic group including at least one hydroxyl group, straight or branched C1-10 acetal including at least one hydroxyl group, straight or branched C1-10 acetal including at least one hydroxyl group, straight or branched C1-10 acetal including at least one hydroxyl group. In another embodiment, all of R1, R2, R3, and R4 do not represent hydrogen at the same time.